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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,841	08/10/2001	Kevin T. Chang	MOT-D2553	7061
24375	7590	09/20/2005	EXAMINER	
VOLPE AND KOENIG, P.C. DEPT. MOT UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103			LAM, WAI YIP	
			ART UNIT	PAPER NUMBER
			2614	
DATE MAILED: 09/20/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/927,841	<b>Applicant(s)</b> CHANG ET AL.	
	<b>Examiner</b> Wai Lam	<b>Art Unit</b> 2614	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to because Unit 320 in Figure 3 denotes a high pass filter wherein the specification teaches Unit 320 to be a low pass filter.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1 – 5, 7 – 8, 10 – 11, 13 – 17 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,815,794 (Williams).

As to claim 1, Williams teaches a cable system (System 100 in Figure 1) having an RF module (Everything right of Unit 316 of Module 170 excluding Unit 316 in Figure 3) coupled to provide bidirectional communication between drop interface (Unit 316 in Figure 3) and a home interface (Remote point 104 in Figure 3).

Williams also teaches the said RF module (Everything right of Unit 316 of Module 170 excluding Unit 316 in Figure 3) having upstream (Return path 320 in Figure 3) and downstream path (Forward path 325 in Figure 3).

Williams also teaches at least the downstream path (Forward path 325 in Figure 3) having filters (Diplex filter 360 in Figure 3 referring to remote point 104). The downstream path is connected to a diplex filter (Unit 360 in Figure 3) that contains a high pass and low pass filter (Unit 370 and Unit 365 in Figure 3, respectively).

Williams also teaches a controller (Headend 102 in conjunction with Unit 140 in Figure 1) for selectively providing unimpeded, partially impeded and fully cut off of cable service in the downstream path (Column 8, lines 14 – 18).

Referring to connections to remote point 104 in Figure 3, unimpeded service is accomplished by closing gate 330. Partially impeded service is accomplished by diplex filter 365 in Figure 3, partially impeding downstream service from a 54 – 750 MHz range (Column 5, lines 3 – 4). Fully cutoff service is accomplished by opening gate 330.

As to claim 2, see rejection of claim 1 and note that Williams also teaches relays (gates 330 – 333 in Figure 3) in the downstream path are operated by the controller (Headend 102 in conjunction with Unit 140 in Figure 1, Column 8, lines 14 - 18) to obtain unimpeded, partially impeded, and fully cutoff cable services.

As to claim 3, see rejection of claims 1 and 2 and note that Williams also teaches a filter (Diplex filter 360) for impeding frequencies above a given frequency (750 MHz, Column 5, lines 3 – 4) is selectively coupled into the downstream path (Forward path 325 in Figure 3) by said relays (Gates 330 – 333) in Figure 3) to pass only frequencies below said given frequencies below said given frequency (Column 5, lines 20 – 24).

As to claim 4, see rejections of claims 1 and 2 and note that Williams also teaches the controller (Headend 102 in conjunction with Unit 140 in Figure 1) operates said relays (Gates 330 – 333 in Figure 3) to provide an open circuit in

the downstream path to fully cut off cable service in the downstream path (Column 8, lines 14 – 18).

As to claim 5, see rejections of claims 1 and 2 and note that Williams also teaches the downstream path (Forward path 325 in Figure 3) is provided with a bypass conductor (Gate 330 being closed in Figure 3) selectively coupled in the downstream path to provide unimpeded cable service to the subscriber (Column 8, lines 14 – 18).

As to claim 7, see rejection of claim 1 and note that Williams also teaches a cable system at least the upstream path (Return path 320 in Figure 3) having filters (Diplex filter 360 in Figure 3 referring to remote point 104). Diplex filter 360 that is connected to the upstream path contains a high pass filter and a low pass filter (Unit 370 and Unit 365 in Figure 3, respectively).

Williams also teaches a controller (Headend 102 in conjunction with Unit 140 in Figure 1) for selectively providing unimpeded, partially impeded and fully cut off of cable service in the upstream path (Return path 320 in Figure 3, Column 8, lines 14 – 18). Referring to connections to remote point 104 in Figure 3, unimpeded service is accomplished by closing gate 350. Partially impeded service is accomplished by diplex filter 365 in Figure 3, partially impeding downstream service from a 5 – 40 MHz range (Column 5, lines 3 – 4). Fully cutoff service is accomplished by opening gate 350.

As to claim 8, see rejections of claims 1 and 7 and note that Williams also teaches relays (Gates 350 – 353 in Figure 3) in the upstream path (Return path

320 in Figure 3) are operated by the controller (Headend 102 in conjunction with Unit 140 in Figure 1, Column 6, lines 64 – 67, Column 8, lines 30 - 33) to obtain unimpeded, partially impeded, and fully cutoff cable services.

As to claim 10, see rejections of claims 1, 7 and 8 and note that Williams also teaches the controller (Headend 102 in conjunction with Unit 140 in Figure 1) operates said relays (Gates 350 – 353 in Figure 3) to provide an open circuit in the upstream path to fully cut off cable service in the upstream path (Column 6, lines 64 – 67, Column 8, lines 30 - 33).

As to claim 11, see rejections of claims 1, 7 and 8 and note that Williams also teaches the upstream path is provided with a high pass filter (Diplex filter 365 referring to connections to remote point 104) selectively coupled (opening and closing of Gate 350 referring to connections to remote point 104) in the upstream path (Return path 320 in Figure 3) to provide unimpeded service in the upstream path (When Gate 350 is closed referring to connections to remote point 104).

As to claim 13, see rejections of claims 1 and 7.

As to claim 14, see rejections of claims 1, 2, 7, 8, and 13.

As to claim 15, see rejections of claims 1, 7, and 13 and note that Williams also teaches a filter (Diplex filter 365 referring to remote point 104) for impeding frequencies below a first frequency and above a second frequency (Below 5 MHz and above 40 MHz, Column 5, lines 3 – 4) is selectively coupled into the

upstream path (Return path 320 in Figure 3) by said relays (Gate 350 in Figure 3) to pass only frequencies between said first and second frequencies.

As to claim 16, see rejections of claims 1, 4, 7, 10, and 13.

As to claim 17, see rejection of claim 13 and note that Williams also teaches the upstream path (Reverse path 325 in Figure 3 referring to remote point 104) is provided with a bypass conductor (Gate 350 being closed in Figure 3) selectively coupled in the downstream path to provide unimpeded cable service to the subscriber (Column 8, 30 – 33). When the return path gate 350 in Figure 3 closes, time multiplexed data is allowed through the upstream path 325, thus allowing unimpeded service.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 6, 9, 12, 18, 19, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,815,794 (Williams) in view of U.S. Patent No. 6,678,893 (Jung).

As to claim 6, Williams teaches the cable system as discussed in claim 1.

Williams fails to teach an adjustable amplifier in the downstream path operated



Art Unit: 2614

by said controller for providing signal amplification to compensate for insertion loss.

However, Jung teaches an adjustable amplifier in the downstream path (Units 501, 502, 503, and 504 in the downstream path of Figure 5) operated by the headend (Unit 400 in Figure 4) for providing signal amplification to compensate for attenuation (Column 3, lines 22 – 25, Column 4, lines 14 – 16, 33 – 46). This reads on the limitations corresponding to the present claim.

At the time of the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the headend of Williams, using the downstream amplifier (Units 501, 502, 503 and 504 in Figure 5) controlled by the headend of Jung, for the purpose of minimizing level changes of signals, therefore limiting signal loss to the end-user terminal (Column 2, lines 21 – 24).

As to claim 9, see rejections of claims 1 and 6 and note that Williams also teaches a filter (Diplex filter 360 referring to remote point 104 in Figure 3) for impeding frequencies below a first frequency and above a second frequency is selectively coupled (selectively coupled by switch 330 referring to remote point 104 in Figure 3) into the downstream path by said relays to pass only frequencies between said first and second frequencies (54 – 750 MHz, Column 5, line 4).

As to claim 12, Williams teaches the cable system as discussed in claim 7. Williams fails to teach an adjustable amplifier in the upstream path operated by the controller to provide power equalization to limit ingress noise in the upstream path.

However, Jung teaches an adjustable amplifier in the upstream path (Units 501, 502, 503, and 504 in the upstream path of Figure 5) operated by the headend (Unit 400 in Figure 4) for providing signal amplification to provide power equalization to limit ingress noise in the upstream path (Column 3, lines 22 – 25, Column 4, lines 14 – 16, 37 – 46). This reads on the limitations corresponding to the present claim.

At the time of the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the headend of Williams, using the upstream amplifier controlled by the headend of Jung, for the purpose of convenience so that the headend can have remote control of the gain of the amplifier (Column 3, lines 22 – 27).

As to claim 18, see rejections of claims 13, 14 and 15 and note that Williams also teaches the use of a cable modem (Unit 185 in Figure 4). Unit 185 modulates and demodulates data in a cable network; therefore Unit 185 is considered a cable modem.

Williams fails to teach the cable system wherein the upstream path provided with an amplifier controlled by the cable modem to provide power equalization to limit ingress noise from the home interface.

However, Jung teaches the cable system wherein the upstream path is provided with an amplifier (Units 501, 502, 503 and 504 of upstream path in Figure 5) by a cable modem (Figure 6) to provide power equalization to limit

ingress noise from the home interface (Column 2, lines 33 – 34, 43 – 45, Column 3, 23 – 25, Column 4, lines 32 – 40).

At the time of the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the cable modem of Williams, using the upstream amplifier controlled by the cable modem of Jung, for the purpose of minimizing level changes of signals, therefore limiting signal loss to the headend (Column 2, lines 43 – 45).

As to claim 19, see rejections of claims 13, 14 and 15 and note that Williams also teaches the use of a cable modem (Unit 185 in Figure 4). Unit 185 modulates and demodulates data in a cable network; therefore Unit 185 is considered a cable modem.

Williams fails to teach the cable system wherein the downstream path provided with an adjustable amplifier controlled by the cable modem to avoid excessive insertion loss.

However, Jung teaches the cable system wherein the downstream path is provided with an amplifier (Units 501, 502, 503 and 504 of upstream path in Figure 5) controlled by a cable modem (Figure 6) to avoid insertion loss.

At the time of the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the cable modem of Williams, using the downstream amplifier controlled by the cable modem of Jung, for the purpose of minimizing level changes of signals, therefore limiting signal loss to the end-user terminal (Column 2, lines 21 – 24).

3. Claims 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,815,794 (Williams) in view of U.S. Patent Application No. 09/784,068 (Dobes et al.).

As to claim 20, Williams teaches a cable system comprising a cable modem (Figure 6 of Williams). Williams also teaches a cable system providing a pass-through path (Path 320 and Path 325 in Figure 3 of Williams) between a drop interface (Unit 316 in Figure 3 of Williams) and a home interface (Remote point 104 in Figure 3). Williams also teaches said pass-through path being divided into forward (Path 325 in Figure 3 of Williams) and return paths (Path 320 in Figure 3 of Williams). Williams also teaches said forward and return paths having filters (Diplex filter 360 in Figure 3 of Williams) for cutting off selected frequencies to selectively control the provision of cable service in said paths.

Williams fails to teach a splitter for providing the pass through path and for coupling the cable modem to the drop interface.

However, Dobes et al. teaches a splitter for providing pass-through path between a drop interface (Tap 102 in Figure 3 of Dobes et al.) and a home interface (TV 104 in Figure 3 of Dobes et al.) and for coupling the cable modem (Cable modem 105 in Figure 3 of Dobes et al.) to the drop interface (Tap 102 in Figure 3 of Dobes et al.)

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the cable system of Williams, using

the splitter of Dobes et al., for the purpose of eliminating the cost of connecting multiple cables from the tap to interface multiple devices.

4. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,815,794 (Williams) in view of U.S. Patent Application No. 09/784,068 (Dobes et al.) as applied to claim 20 above, and further in view of U.S. Patent No. 6,094,211 (Baran et al.)

As to claim 21, see rejection of claim 20 and note that Williams also teaches the cable system comprising relays (Gate 325 and 330 in Figure 3 of Williams) in said forward (Path 325 in Figure 3 of Williams) and return (Path 320 in Figure 3 of Williams) paths for selectively controlling the unimpeded, partially impeded, and fully impeded cable service in said forward and return paths as discussed above.

Williams fails to teach the relays are under control of the cable modem.

However, Baran et al. teaches a method wherein an attenuating device (Unit 50 in Figure 4 of Baran et al.) is under the control of the cable modem (Unit 34 in Figure 1 of Baran et al., Column 8, lines 20 –22, 42 – 61).

At the time of the invention was made, it would have been obvious for a person of ordinary skill in the art, to modify the cable modem of Williams, using the method of controlling a switch of Baran et al., for the purpose saving resource and processing power of the headend by giving switching controls to the cable modem.

**Conclusion**

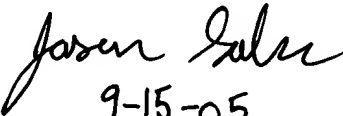
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai Lam whose telephone number is (571) 272-2827. The examiner can normally be reached on Monday - Friday 7:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Jason Salce  
Art Unit 2614  
  
9-15-05